DOCUMENT RESUME

ED 366 779 CE 065 647

AUTHOR Soares, Magda Becker
TITLE Literacy Assessment and Its Implications for Statistical Measurement. Current Surveys and Research in Statistics.
INSTITUTION United Nations Educational, Scientific, and Cultural Organization, Paris (France). Div. of Statistics on Education.
REPORT NO CSR-E-62
PUB DATE Mar 92
NOTE 35p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Adult Basic Education; Data Collection; *Evaluation Criteria; *Evaluation Methods; Illiteracy; Literacy; *Literacy Education; Measurement Objectives; *Measurement Techniques; *Sampling; *Statistical Surveys

ABSTRACT

Three conceptual issues form the basis for coping with technical problems of gathering data on literacy: (1) the definition of literacy; (2) choice of criteria that can be used in properly assessing and measuring literacy; and (3) conflict between the importance and necessity of literacy assessment and the difficulty of fulfilling the prerequisite for doing it. As a result of the difficulty in defining literacy, an essential precondition for literacy assessment and statistical measurement is not fulfilled: a precise definition from which to derive criteria for distinguishing between l erate and illiterate persons. Two main problems with literacy a..essment and measurement in school settings are the concept of schooled literacy and the different educational and social effects of schooled literacy in developed and developing countries. Censuses and surveys gather self-assessed data that are likely to be inaccurate or data based on a grade completion criterion that relies on either equivocal or controversial assumptions. By assessing literacy in terms of a representative population sample's actual competencies, a literacy survey secures a more accurate view of the extent and quality of literacy in the population. At least three major arguments support the need for generating literacy indexes through assessment and measurement: the literacy index of a population is a basic indicator of a country's or community's progress; literacy indices are extremely useful for comparative purposes; and they are essential to formulating policies and to planning, implementing, and monitoring programs. (Contains 58 references.) (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

CSR-E-62

Current surveys and research in statistics

ED 366 779

SCOPE OF INTEREST NOTICE
The Eric Facility has assigned the document for processing to: CE

In our judgment, this document is also of interest to the Clearinghouses noted to the right. Indexing should reflect their special points of view TM

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

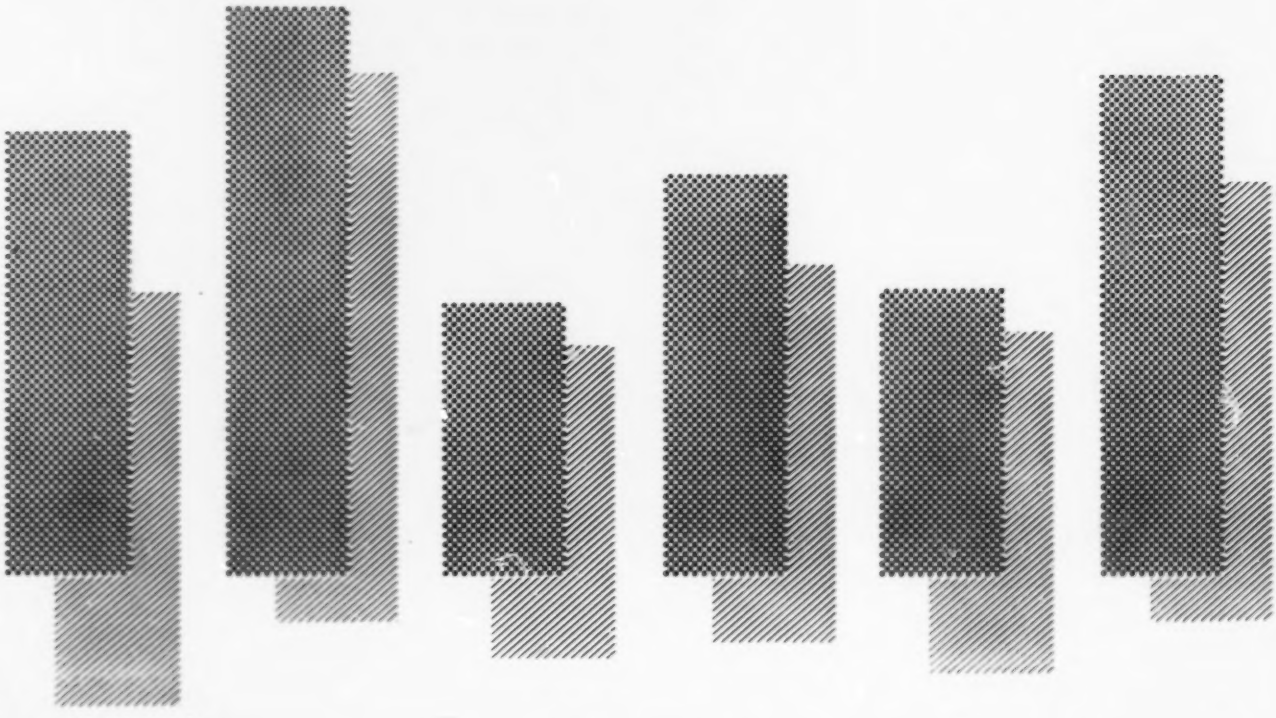
F Zambrini

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Literacy Assessment and its Implications for Statistical Measurement

Study prepared by Magda Becker Soares,
professor at the Federal University of Minas Gerais, Brazil,
for the Section of Statistics on Education
Division of Statistics

March 1992



CE 065 647

BEST COPY AVAILABLE

UNESCO

Titles published in this series by the Division of Statistics on Education since 1980

CSR-E-35 La asignación de recursos para la educación en el mundo 1980 (Spanish only)

CSR-E-36 Análisis comparado de la escolarización y del analfabetismo femeninos y masculinos. 1980 (Spanish only)

CSR-E-37 Wastage in Primary and General Secondary Education: A Statistical Study of Trends and Patterns in Repetition and Drop-out. 1980 (English, French)

CSR-E-38 ISCED Handbook: Soviet Union. 1980 (Russian only)

CSR-E-39 World School-age Population until Year 2000: Some Implications for the Education Sector. 1981 (English, French)

CSR-E-40 Statistical Methods for Improving the Estimation of Repetition and Drop-out: Two Methodological Studies. 1981 (English,Spanish)

CSR-E-42 Development of Education in the Least Developed Countries since 1970: A Statistical Study. 1983 (English, French)

CSR-E-44 Statistics of educational attainment and illiteracy 1970-1980. 1983 (English, French, Spanish)

CSR-E-46 Trends and Projections of Enrolment by Level of Education and by Age, 1960-2000. 1983 (English only)

CSR-E-47 Technical and Vocational Education in the World 1970-1980. A Statistical Report. 1983. (English,French)

CSR-E-50 Female Participation in Higher Education: Enrolment Trends 1975 - 1982. 1985 (English, French)

CSR-E-51 ISCED Handbook: Kingdom of Saudi Arabia. 1985 (English only)

CSR-E-52 Methodological and Practical Guide to Formulating an Economic Accounting System for the Education Sector: Case Study of France. 1986 (English, French)

CSR-E-56 Education Statistics. Latest year available. 1988. (English, French, Spanish)

CSR-E-62

Current surveys and research in statistics

Literacy Assessment and its Implications for Statistical Measurement

Study prepared by Magda Becker Soares,
professor at the Federal University of Minas Gerais, Brazil,
for the Section of Statistics on Education
Division of Statistics

March 1992

UNESCO

ST-92/WS-4

Preface

In 1990 the world's adult literacy rate was 73.5% and is expected to reach 78% by the year 2000. Thus, the estimated population of adult illiterates will have reached 935 million by the end of the century. These global figures, which reveal the magnitude of the problem of illiteracy in the world, disguise in fact great disparities, as was pointed out in the "Compendium of statistics on illiteracy - 1990 edition", published in this series.

Generally, official statistics on literacy are obtained from surveys or replies to a simple question on the census form, such as "can you read and write?". Furthermore, these statistics are usually derived from individual replies based on a self-evaluation, and not from literacy tests. Consequently, the role of the enumerator and the criteria used to determine whether a person is literate or not can have a great influence on the results obtained.

According to UNESCO's World Education Report 1991, "as increasing proportions of the population in more and more countries pass the literacy threshold represented by the traditional question on the census form, it becomes much more difficult to formulate national literacy policy goals or targets in an operational way. At least, there are no easily defined "percentages" of literacy or illiteracy available to be increased or reduced; instead there is a wide spectrum of literacy competencies in the population with some persons having significantly weaker or less effective competencies than others."

The improvement of the literacy database is therefore a crucial issue and a stepping-stone to the elaboration of adequate literacy policies and plans of action. One of the prioritary tasks related to this objective is the improvement of definitions and criteria to be used for literacy assessment. It is through constant dialogue between educational researchers, planners and statisticians that more adequate methods for measuring literacy can be elaborated and applied.

In order to further develop this dialogue, the Division of statistics has invited Ms. Magda Becker Soares, a Brazilian educationalist who has a long experience in the field of literacy, to prepare an analytical study on literacy assessment and measurement. We hope that the numerous questions raised in this study will contribute to nourish the debate between researchers, planners and statisticians.

Section of Statistics on Education
Division of Statistics
March 1992

TABLE OF CONTENTS

Introduction 2

1. Literacy: The Quest for a Definition 3

The individual dimension of literacy 4
The social dimension of literacy 6
Is a definition possible? 9

2. Assessing and Measuring Literacy: In Pursuit of Criteria 11

Literacy assessment and measurement in school settings 11
Literacy assessment and measurement in censuses surveys 13
Literacy assessment and measurement in special surveys 19

3. Literacy Assessment and Measurement: A Challenging Enterprise 23

References 27

INTRODUCTION

The continuing challenge posed by the world-wide quest for promoting universal literacy is closely linked with that of ensuring assessment and measurement of progress towards this goal. Data on literacy are necessary either as indicators of achievement of that goal or as a framework for literacy policy-making and literacy programme implementation or monitoring. International and national institutions and organizations are thus continuously gathering data and producing statistics on literacy through assessment and measurement procedures.

The processes for gathering these data, however, present serious problems, with technical, conceptual, ideological and political aspects.

The technical aspects constitute certainly the most evident and pressing problems; they relate to the processes of decision-making involving the design of assessment procedures, creation of assessment instruments, editing and processing data, etc.

Nevertheless, there are a number of conceptual issues which ought to be the basis for coping with these technical problems, but are commonly neglected because of constant pressure to solve immediate technical problems.

A first and essential conceptual issue is the definition of literacy itself. When gathering data on literacy, or producing statistics on literacy, a central question must be answered: what is this literacy being assessed and measured? Literacy assessment and measurement must rely upon a precise definition of literacy; however, is such a definition possible?

A second conceptual problem, closely connected with the first, is the choice of criteria which can or should be used in properly assessing and measuring literacy. Traditionally, literacy is assessed and measured in school settings, in national population censuses and in special sample surveys. Which criteria are used to assess it in each situation? And what is this literacy that underlies these criteria? In other words, how does literacy assessment in school settings and in surveys (national population surveys or household surveys) attempt to face the problem of defining literacy and then specifying criteria to assess it?

Finally, and as a result of the preceeding issues, a third problem emerges. On the one hand, the need for and importance of literacy assessment and statistical measurement is fully recognized; on the other hand, fulfilling the prerequisites to do it, that is, defining literacy precisely and specifying reliable criteria to assess and measure it, is a highly contentious task. How to face this paradox?

The scope of this study is to highlight and discuss these conceptual problems. It begins (Part 1) by examining the concept of literacy as a multi-faceted and extremely complex phenomenon; it is argued that consensual agreement on a single definition is quite implausible. The study continues by reviewing literacy assessment and measurement in school settings, national population censuses and sample surveys; shortcomings and equivocal assumptions of criteria generally used are identified and criticized (Part 2). Finally, in the last part (Part 3), some of the major arguments in favour of literacy assessment and measurement are considered, and ways of facing the conflict between the importance and necessity of literacy assessment and the difficulty of fulfilling the prerequisite for doing it are suggested. Part 3 concludes by raising the ideological and political aspects of defining literacy and assessing and measuring it; actually, the main purpose of this study is to provide a conceptual framework for discussing these ideological and political issues which undoubtedly constitute the core of the problem.

1. LITERACY: THE QUEST FOR A DEFINITION

Any assessment procedure or statistical measurement requires a precise definition of the phenomenon being assessed and measured, to be used as a yardstick. Undoubtedly, most difficulties in and controversies about literacy assessment and statistical measurement stem from a failure to define *literacy* properly and establish its boundaries clearly. This failure is due to the fact that literacy covers an extremely wide spectrum of knowledge, abilities, skills, values, social uses and functions; literacy behaviour, therefore, is characterized by subtleties and complexities difficult to account for in one single definition. This explains why definitions of literacy differ, and even conflict with or contradict each other: each definition is contingent on the dimension of literacy being considered. The following concepts illustrate two radically different approaches to defining literacy:

> To study and interpret literacy... requires three tasks The *first* is a consistent definition that serves comparatively over time and across space. *Basic or primary levels of reading and writing* constitute the *only* flexible and reasonable indications or signs that meet this essential criterion... literacy is above all *a technology or set of techniques for communications and for decoding and reproducing written or printed materials*: it cannot be taken as anything more or less. (Graff, 1987a, pp. 18-19, emphasis in the original)

> Most efforts at definitional determination are based on a conception of literacy as an attribute of *individuals*; they aim to describe constituents of literacy in terms of individual abilities. But the single most compelling fact about literacy is that it is a *social* achievement... Literacy is an outcome of cultural transmission... The enterprise of defining literacy... becomes one of assessing what counts as literacy in the modern epoch in some given social context. ... Grasping what literacy "is" inevitably involves social analysis... (Scribner, 1984, pp. 7, 8, emphasis in the original)

Two major dimensions of literacy lie behind these definitions: the *individual* dimension and the *social* dimension. When the focus is on the individual dimension, literacy is seen as a *personal* attribute, seeming to refer, as Wagner (1983, p. 5) put it, to "simple individual possession of the complementary mental technologies of reading and writing". When the focus shifts to the social dimension, literacy is seen as a *cultural* phenomenon, a set of social activities involving written language and of social demands on the use of written language. One or another of these two major dimensions takes priority in most current definitions of literacy: the emphasis in any definition is either on individual capabilities of reading and writing, or on uses, functions and purposes of written language in the social context[1].

Identifying these two major dimensions behind different definitions of literacy, however, is only the first step in tackling the problem of a suitable definition that could be used as a yardstick in assessing and measuring the phenomenon. While the identification of two broad categories of definitions - those focusing the *individual* dimension of the phenomenon, and those focusing its *social* dimension - does shed some light on the problem, it is not sufficient to fully elucidate the question, because it still overlooks the complexity and heterogeneous nature of each dimension.

---

1. *Numeracy (the ability to make use of a number system) is sometimes incorporated into the concept of literacy; in this study, however, literacy is used in its literal sense, referring exclusively to reading and writing. As an aside, it is interesting to not that a range of other meanings has been recently attached to the term literacy, now frequently used in compound terms like mathematical literacy, scientific literacy, computer literacy, graphic literacy, visual literacy, musical literacy, among many others. In fact, although this expansion of the term is, in Robinson's (1987, p. 329) words, "an interesting semantic phenomenon", it constitutes "a barrier to clear thinking about the topic".*

The next two sections focus on this complex and heterogeneous nature of the individual and the social dimensions of literacy.

The individual dimension of literacy

From the perspective of the *individual* dimension, a great deal of confusion is generated by the range and diversity of personal capabilities that can be seen as constituents of literacy.

A first source of confusion, right at the heart of the matter, is that literacy involves two fundamentally different processes: *reading* and *writing*. In Smith's words:

> Writing and reading are often thought of as mirror images of each other, as reflections from opposite angles of the same phenomenon, communication through written language. But there are radical differences between the skills and knowledge employed in reading and those employed in writing, just as there are considerable differences in the processes involved in learning to read and in learning to write.
>
> (Smith, 1973, p. 117)

Despite these "radical" differences, definitions of literacy often represent reading and writing as a unified skill, disregarding the peculiarities of each and dissimilarities between them (one may be able to read, but not be able to write; or one may be a fluent reader, but a poor writer).

On the other hand, definitions of literacy that take into account the differences between reading and writing tend to concentrate either on reading or on writing (more often on reading), ignoring that the two processes are complementary: they are different but together form the concept of *literacy*. Bormuth (1975), for example, states that "literacy is the ability to exhibit all of the behaviors a person needs in order to respond appropriately to all possible *reading* tasks" (p. 72, emphasis added). And Kirsch and Guthrie (1977-1978) argue that "it would seem prudent to use the term *literacy* to refer to reading and *cognitive competency* to refer to general skills in listening, reading, writing, and calculating" (p. 505, emphasis in the original).

This disregard for the coexistence of two heterogeneous constituents (reading and writing) under the concept of literacy is even less adequate given the fact that each of these constituents refer to a cluster of rather different skills, and not to one single skill.

Reading, from the perspective of the individual dimension of literacy (reading as a "technology"), is a set of linguistic and psychological skills, stretching from the ability to decode written words to the capacity of understanding written texts. These are not polar but complementary categories; reading *is* a process of relating written symbols to sound units, and *is also* a process of constructing an interpretation of written texts.

Thus, reading stretches from the ability to sound out nonsense syllables to cognitive and metacognitive reasoning abilities; it includes, among others: the skill of decoding written symbols; a meaning-getting ability; the capacity of interpreting sequences of ideas or events, analogies, comparisons, figurative language, complex relations, anaphora; and finally, cognitive reasoning abilities, as Herrmann (1990) points out: the ability of making initial predictions about the text's meaning, of constructing meaning by combining prior knowledge with text information, of monitoring comprehension and modifying initial predictions when necessary, of reasoning about the significance of what was read, drawing conclusions and making judgements about the content.

Besides this great variety of reading skills there is the fact that these skills must apply differently to a wide array of reading materials: literature, textbooks, technical works, dictionaries, directories, encyclopaedias, timetables, catalogues, newspapers, magazines, advertisements, formal and informal letters, labels and menus, signs in stores, traffic signs, street

signs, recipes... As Smith (1973) put it, reading may take place in many different ways, "from the public recital of poetry to the private scrutiny of price lists and bus timetables" (p. 103).

Like reading, *writing*, under the perspective of the individual dimension of literacy (writing as a "technology"), is also a set of linguistic and psychological skills, although writing skills are fundamentally different from reading skills. While reading skills stretch from the ability to decode written words to the capacity of integrating information from different texts, writing skills stretch from the ability of transcribing sound units to the capacity of conveying meaning adequately to a potential reader. And as was observed about reading, these are not polar but complementary categories: writing *is* a process of relating sound units to written symbols, and *is also* a process of expressing ideas and organizing thought in written language.

In this way, writing encompasses everything from the ability to transcribe speech, via dictation, to cognitive and metacognitive reasoning abilities; it includes motor skills (handwriting), spelling, the appropriate use of punctuation, the ability to retrieve relevant information about the topic and identifying the intended audience, the ability of setting goals for writing and deciding on the best way to approach the writing task, the skill of organizing ideas in a written text, establishing relationships among them, expressing them properly (Herrmann, 1990).

Moreover, writing skills, just as with reading skills, must be applied to producing a wide range of written materials: from just signing one's name or listing things to buy to writing an essay or a doctoral dissertation.

In the light of these considerations about the large number of skills and cognitive and metacognitive reasoning abilities which constitute reading and writing, the heterogeneous nature of these skills and abilities, the wide range of writing genres which reading and writing skills and abilities must apply to, it is clear that a consistent definition which is to serve as a yardstick in assessing and measuring literacy is extremely difficult to formulate, even if we intend to formulate it as contingent only on the *individual* abilities of reading and writing: which reading skills and abilities, which writing skills and abilities should qualify an individual as "literate"? which types of written materials must an individual be able to cope with successfully, to be considered "literate"?

The answers to these questions are very problematic. Literacy competencies are continuously distributed, with various points along the continuum indicating different kinds and levels of skills, abilities, knowledge which can apply to different types of written materials. In other words, literacy is a continuous, not a discrete, dichotomous variable. It is, then, difficult to specify in a non-arbitrary fashion a cut-off point which will separate *literacy* from *illiteracy*. Unesco's monograph *World illiteracy at mid-century* (1957) recognizes that "the concept of literacy is very flexible, and can be stretched to cover all levels of ability from the absolute minimum to an undetermined maximum" (p. 19), and concludes that it is really impossible to speak of literate and illiterate persons as two distinct categories.

However, the definitions of *literate* and *illiterate* introduced by UNESCO in 1958, for purpose of international standardization of educational statistics, is an attempt to make such distinction:

> A person is *literate* who can with understanding both read and write a short simple statement on his everyday life.
>
> A person is *illiterate* who cannot with understanding both read and write a short simple statement on his everyday life.
>
> (Unesco, 1958, p. 4)

Focusing on the individual dimension of literacy, the definitions determine which reading and writing skills characterize a literate person (to read and write *with understanding*), and to which type of written materials these skills must apply (a short simple statement on one's

everyday life). Nevertheless, the definition is arbitrary: based on which argument does it select a particular skill (reading and writing *with understanding* - notwithstanding the ambiguity of the expression "with understanding") and a particular type of written materials (*a short simple statement of one's everyday life*) as the benchmark for defining a person as *literate*? This question provides the frame for the discussion presented in the next section.

The social dimension of literacy

Those who focus on the social dimension of literacy argue that literacy is neither a uniquely nor an essentially personal attribute, but rather a question of social practice: literacy is what people *do* with reading and writing skills and abilities, in a specific context, and how these skills and abilities relate to social needs, values and practices. In other words, literacy is not purely and simply a set of individual skills and abilities; it is a set of social practices associated with reading and writing actually engaged in by individuals within a social context.

Nevertheless, there are conflicting views on the nature of the social dimension of literacy: a progressive, "liberal" view - a "weak" version of the attributes and implications of this dimension - and a radical, "revolutionary" view - a "strong" version of its attributes and implications.

According to a progressive, "liberal" view of the relationship between literacy and society, reading and writing skills and abilities cannot be detached from their uses, cannot be separated from the empirical forms they actually take within social life; literacy, in this "weak" version of the social dimension of literacy, is described in terms of skills and abilities necessary *to function* in a social context - hence the term *functional literacy*, which gained currency since the publication in 1956 of Gray's international survey of reading and writing, carried out for Unesco. Gray (1956) emphasizes the pragmatic nature of literacy when he subscribes to the concept of *functional literacy* which, as he remarks, had evolved slowly out of a quarter century of reading research and field experience. Gray describes *functional literacy* as knowledge and skills in reading and writing which enable a person "to engage in all those activities in which literacy is normally assumed in his culture or group" (p. 24).

The focus on *functionality* as the ultimate essence of reading and writing skills significantly influenced Unesco's definition of literacy for purpose of international standardization of educational statistics. Revising, in 1978, the 1958 Recommendation, the General Conference deemed necessary to introduce a new degree of literacy: although maintaining the 1958 definition of a literate person, based on individual skills, the concept of a "functionally literate person", based on the social uses of reading and writing, is now created:

> A person is functionally literate who can engage in all those activities in which literacy is required for effective functioning of his group and community and also for enabling him to continue to use reading, writing and calculation for his own and the community's development.
>
> (Unesco, 1978a, p. 1)

Functional literacy is, then, *adaptation*, as in Scribner's metaphor (Scribner, 1984): "This metaphor (literacy as adaptation) is designed to capture concepts of literacy that emphasize its survival or pragmatic value." (p. 9) Scribner stresses the importance of functional or survival literacy as follows:

> The necessity for literacy skills in daily life is obvious; on the job, riding around town, shopping for groceries, we all encounter situations requiring us to read or produce written symbols. No justification is needed to insist that schools are obligated to equip children with the literacy skills that will enable them to fulfill these mundane situational demands. And basic educational programs have a similar obligation to equip adults with the skills they must have to secure jobs or advance to better ones, receive the training and benefits to which they are entitled, and assume their civic and political responsibilities. (p. 9)

Literacy, then, implies more than just reading and writing. As Kirsch and Jungeblut (1990) put it, literacy is not simply a set of reading and writing skills, but more importantly the application of those skills toward socially appropriate ends; embracing the faith in literacy's power to favour social and individual progress, the authors define it as "using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential" (p. I-8).

Underlying this liberal, functional concept is the belief that highly positive consequences necessarily stem from literacy: being the application of reading and writing skills for adequate functioning in and participating in society, and for personal achievement, literacy is seen as responsible for bringing about desirable outcomes: cognitive and economic development, social mobility, professional progress, citizenship.[2]

A different assumption about the relationship between literacy and society is found in theorists who present what was previously called a radical, "revolutionary" view of this relationship - the "strong" version of it. While in the liberal, progressive view (the "weak" version) literacy is defined as a set of skills necessary to cope with social practices in which reading and writing are required, in the radical, "revolutionary" view literacy cannot be seen as a neutral "thing" to be used in social practices when required, but it is itself the set of socially constructed practices involving reading and writing, which are shaped by wider social processes and are responsible for reinforcing *or* challenging values, traditions, patterns of power found within social settings.

Street (1984), one of the representatives of this alternative view of the social dimension of literacy, characterizes it as the "ideological" model of literacy, as opposed to the "autonomous" model. According to Street, literacy is "a shorthand for the social practices and conceptions of reading and writing" (p. 1); it has political and ideological significance and cannot be separated from that significance and treated as though it were an "autonomous" thing (p. 8). Street argues that the nature of literacy consists in the forms literacy practice actually takes within given social contexts; it depends upon the social institutions in which literacy is embedded.

Probably the most extreme presentation of the "ideological" model of literacy is that of Lankshear (1987). Arguing against the assumption that literacy is a "thing" which is simply "there" for people to use in whatever ways are demanded by social practices, Lankshear claims that it is impossible to distinguish literacy from the content it is used to acquire and convey, and from any advantages or disadvantages accruing from the particular ways it is used, or the forms it takes (p. 40). What literacy *is* is entirely a matter of how reading and writing are conceived and practised within particular social settings; literacy is a set of reading and writing practices governed by a conception of *what, how, when* and *why* to read and write.

From the standpoint of this concept, the inherent qualities and positive consequences of literacy, stressed by those who support its functionality as a tool for fulfilling social demands and achieving personal goals, are denied. On this view the main assumption is that the consequences of literacy are closely related to and shaped by wider social processes, and employed in defining, transmiting and reinforcing values, beliefs, traditions and patterns of power. The partisans of the "strong" version of the relationship between literacy and society then argue that these consequences are considered desirable and beneficial only by those who accept as just and equitable the nature and structure of the specific social context where literacy occurs. When this is not the case, that is, when the nature and structure of social relations and practices are challenged, literacy is seen as a tool of ideology which only maintains current social relations and practices, accomodating people to existing circumstances. For example: critics of capitalist societies claim that functional literacy, as it is conceived in these societies, only reinforces and deepens relations and practices of structured social and economic advantage and disadvantage; as

---

2. *The frequent assertion that literacy leads to higher levels of cognitive, economic and social status has been challenged by a number of psychological, ethnographic and historical studies; nevertheless, a discussion of this issue is beyond the scope of the present study. For a comprehensive review, see Akinnaso, 1981.*

Lankshear put it, functional literacy "comprises a minimal, essentially negative and passive state: to be functionally literate is to be *not unable to cope* with the most minimal routines and procedures of mainstream existence in contemporary society" (p. 64).

As a result, "revolutionary" alternatives are offered to the liberal, progressive concept of "functional literacy". Freire (1967, 1970a, 1970b, 1976) was one of the first educators to highlight this "revolutionary" power of literacy, stating that to be literate is to use reading and writing as a means of being aware of reality and able to transform it. He conceives the role of literacy to be either human liberation or "domestication", depending upon the ideological context where it occurs, and points out the inherently political nature of literacy, arguing that its principal concern should be the promotion of revolutionary social change.

This new approach to literacy was made clear at the Persepolis International Symposium for Literacy, held in 1975 with Unesco's support[3]. A broadened concept of functional literacy was then suggested, by participants drawing

> ...a distinction between the two main categories of function: the first, economic in character, concerned with production and with working conditions; the rest cultural in character, encouraging the development from primary consciousness to critical consciousness (the process of "conscientization") and the active participation of adults in their own development. (quoted in Street, 1984, p. 187)

Following this distinction, the Declaration of Persepolis considered literacy to be

> ... not just the process of learning the skills of reading, writing and arithmetic, but a contribution to the liberation of man and to his full development. Thus conceived, literacy creates the conditions for the acquisition of a critical consciousness of the contradictions of society in which man lives and of its aims; it also stimulates initiative and his participation in the creation of projects capable of acting upon the world, of transforming it, and of defining the aims of an authentic human development. (quoted in Bhola, 1979, p. 38)

Recently, and in a more radical vein, Lankshear (1987), subscribing to O'Neil's distinction between "properly literate" and "improperly literate" (O'Neil, 1970), but investing it with greater political force, claims that "proper literacy enhances people's control over their lives and their capacity for dealing rationally with decisions by enabling them to identify, understand, and act to transform, social relations and practices in which power is structured unequally" (p. 74). Levine (1982) makes the same point, when he stresses the role of literacy in "creating and reproducing - *or failing to reproduce* - the social distribution of knowledge" (p. 264, emphasis added).

To summarize, concepts of literacy which stress its social dimension are based either on its pragmatic value, that is, its necessity for effective functioning in society (the "weak" version), or on its "revolutionary" power, that is, its potential for transforming unfair social relations and practices (the "strong" version). Nevertheless, both the "weak" and the "strong" versions lead to the relativity of the concept: because social activities with written language rely on the nature and structure of society, and depend upon the particular project each political group intends to implement, they vary in time and space. Graff (1987a) claims that the meaning and contribution of literacy cannot be *pre*sumed, ignoring "the vital role of *sociohistorical context*" (p. 17). In his own words:

> The major problem, which lags far behind in efforts to study literacy whether in the past or present, is that of reconstructing the contexts of reading and writing: how, when, where, why, and to whom literacy was transmitted; the meanings that were assigned to it; the uses to which it was put; the demands placed on literate abilities; the degrees which those demands were met; the changing extent of social

---

3. *An exhaustive study of how Unesco's concept of literacy and programs for promoting it have evolved from 1946 to 1987 is available in Jones (1988).*

> restrictedness in the distribution and diffusion of literacy; and the real and symbolic differences that emanated from the social condition of literacy among the population. (p. 23)

It is, then, impossible to formulate a single concept of literacy, adequate for everybody, everywhere, at any time, in any cultural or political context.

Historical studies document the shifting conceptions of literacy over time[4]; anthropological and ethnographic studies illustrate the differing ways in which literacy is used, depending upon cultural beliefs, values, practices and history within each social group[5]. As Scribner (1984) put it:

> At one time, ability to write one's name was a hallmark of literacy; today in some parts of the world, the ability to memorize a sacred text remains the modal literacy act. Literacy has neither a static nor a universal essence. (p. 8)

From a historical and anthropological point of view, it is, for example, significant that the English language needed the term *illiteracy* a long time before the term *literacy* was coined; as Charnley & Jones (1979) remark, the *Oxford English Dictionary* records the term *illiteracy* from 1660, while the positive term *literacy* was not coined until the end of the 19th century (p. 8). The advent of the term *literacy* at that time represented undoubtdedly a historical shift in social practices: new social demands for the use of reading and writing required a new word to label them. Consequently, a new concept was generated.

It is interesting to note that in countries where complex social demands for the use of reading and writing are not yet widely disseminated, the language does not offer a term equivalent to *literacy*; Brazilian portuguese, for example, has needed the negative terms "analfabeto" and "analfabetismo" for a very long time, but only recently are terms equivalent to *literacy* being coined - "alfabetismo", "letramento". The concept opposite to "analfabetismo", meaning more than being able to sign one's name or read and write a simple sentence, is being generated as new demands are being placed upon literate behaviour.

We may conclude, then, that there are different concepts of literacy relating to particular social needs and conditions existing in distinct historical and developmental stages.

Moreover, from a sociological point of view, within any given society a wide range of literacy activities are practiced in distinct social settings and play different roles in the lives of various groups and individuals. Hence, people bearing different social rank and their associated occupations and styles of life face quite different functional demands: sex, age, rural or urban residence, and ethnicity are, among others, factors which may determine the nature of literate behaviour. It seems unlikely that it will be possible to define a universal set of "functional literacy" competencies: which parameters should be chosen for selecting and defining them? Similarly, from the standpoint of a "liberating" literacy, people having different ideologies and consequently different political goals construct different literacy practices, each one being a response to specific values, assumptions, ideals rather than others. Thus, the concept of literacy in societies undergoing a process of revolutionary change (e.g. Cuba, in the 60s, Nicaragua, in the 80s) is not the same as in politically stable countries.

Is a definition possible?

From the discussion developed above, we may conclude that the concept of literacy involves a set of structures ranging from individual skills, abilities, knowledge, to social practices and functional competencies, to ideological values and political goals.

---

4. *See, for example: Graff (1987a, 1987b), Schofield (1968), Resnick & Resnick (1977), Furet & Ozouf (1977), Chartier & Hébrard (1989), Chartier (1985).*
5. *See, for example: Goody (1968, 1987), Levine (1982, 1986), Heath (1983), Finnegan (1988), Scribner & Cole (1981), Wagner (1983, 1986, 1991), Schieffelin & Gilmore (1986).*

Recognizing these multiple meanings and varieties of literacy, Scribner (1984) argues for the need to "disaggregate" its various levels and kinds, in a disentangling process (p. 18). Harman's suggestion of a definition of literacy encompassing three stages represents an attempt to pursue this required "disaggregation":

> The first (stage) is the conceptualization of literacy as a tool. The second is literacy attainment, the learning of reading and writing skills. The third is the practical application of these skills in activities meaningful to the learner. Each stage is contingent upon the former; each is a necessary component of literacy.
>
> Harman, 1970, p. 228)

A second example of attempts to "disaggregate" literacy is the contemporary tendency to qualify the term, making distinctions between *basic* and *critical* literacy, *proper* and *improper* literacy, *functional* and *full* literacy, *general* and *specialized* literacy, *domesticating* and *liberating* literacy, *descriptive* and *evaluative* literacy, etc.

A more radical attempt to "disaggregate" literacy into its components is found in writers who, rather than seeing literacy as having "stages" or components, or as needing to be qualified, support the argument that it is more appropriate to refer to *literacies* than to a single unitary *literacy*:

> ... we would probably more appropriately refer to "literacies" than to any single "literacy".
>
> (Street, 1984, p. 8)

> ... we must speak of literacies, rather than literacy, both in the sense of multiple languages and scripts, and in terms of multiple levels of skills, knowledge, and beliefs within each language and/or script domain.
>
> (Wagner, 1986, p. 259)

> ... we should identify and examine different literacies rather than assert or assume a single unitary literacy.
>
> (Lankshear, 1987, p. 48)

We may conclude that defining literacy is therefore a highly contentious task; the emergence of a generally accepted definition is unlikely. As Cervero (1985) remarks, however, "having argued that a common definition is not feasible ... does not imply that there is not a need for a common definition" (p. 53). A common definition is needed especially if one is concerned with literacy assessment and measurement: without it, how to determine the criteria to be used as a benchmark for distinguishing literacy from illiteracy? In the next section, some criteria commonly used to assess and measure literacy are examined and criticized from the standpoint of the definitional controversy.

2. ASSESSING AND MEASURING LITERACY: IN PURSUIT OF CRITERIA

A crucial consequence arises from the difficulty in defining literacy discussed above: an essential precondition for literacy assessment and statistical measurement - a precise definition from which to derive criteria to be used as a benchmark for distinguishing between literate and illiterate persons - is not fulfilled.

Failing to fulfil this precondition, literacy assessment and statistical measurement supplied both by population censuses, household surveys and school systems generally produce imprecise literacy data. According to population censuses, almost one billion members of the world adult population (aged 15 and over) are illiterate (Unesco, 1990); according to household surveys, literacy is nowadays a major problem even in developed countries (see, for example, Kirsch & Jungeblut, 1990); according to educational statistics, both in developed and in developing countries a startling number of children fail to acquire literacy in the early grades of elementary school[6]. However, what is this literacy (or illiteracy) that underlies these data? If literacy is a continuum representing different kinds and levels of skills, abilities, knowledge, and is a set of social practices involving heterogeneous uses of reading and writing for varying purposes, which cut-off point separates literate from illiterate adults, in population censuses and household surveys, or children who succeed in acquiring literacy from children who fail to acquire it, in school settings?

The prevailing attempts to confront this problem are discussed below. As literacy assessment and measurement depend primarily upon the purpose they are intended for, the discussion is presented under the following categories: literacy assessment and measurement in school settings, in national population censuses, and in special sample surveys.

Literacy assessment and measurement in school settings

The legitimate locus for ensuring literacy in contemporary societies is the school system (although it is not impossible, as Scribner & Cole (1981) have shown, to have literacy without schooling); according to Cook-Gumperz (1986), "it is an unquestioned part of present-day social knowledge that literacy is both the purpose and product of schooling" (p. 16)[7]. But what is this literacy pursued as the *purpose* and *product* of schooling, and how is it assessed and measured, in school settings?

In confronting the conflict between lack of a precise definition of literacy and its assessment and measurement, the school system faces simultaneously advantageous and disadvantageous conditions.

Advantageous conditions stem from the fact that literacy is, in school settings, a *process*, rather than a *product*; as a consequence, schools can make use of assessment and measurement at different points of the literacy continuum, evaluating in a progressive manner the acquisition of literacy skills, abilities, knowledge, cultural uses, and thus avoiding the problem of choosing a single cut-off point to distinguish a literate from an illiterate individual.

---

6. *For example: In Brazil, as in many Third World countries, a very high percentage of children (50% or more) repeat the first grade because they are deemed to have failed in becoming literate; McGill-Franzen & Allington (1991) state that, in North America, "record numbers of children are repeating the early grades primarily because they are 'behind' in reading" (p. 87). For a critical review of Latin American data, see Roca (1989).*

7. *The history of the relationships between literacy and schooling elucidates present-day procedures for literacy assessment and measurement in school settings, but a discussion of them is beyond the scope of the present study; for a critical review, see Cook-Gumperz (1986).*

On the other hand, the "teleological" character of the school system brings about disadvantageous conditions for dealing with the conflict between lack of a precise definition of literacy and its assessment and measurement. Schools are institutions to which society delegates the responsibility of providing the rising generation with skills, knowledge, beliefs, values, and attitudes deemed to be essential for shaping the average citizen. To accomplish this, the organized system of schooling stratifies and codifies knowledge, selecting what has to be learned, dividing it into small "parts", planning in how many periods (terms, grades) and in which sequence it is to be learned, and evaluating periodically, at predetermined occasions, whether each "part" has been sufficiently well-learned. In this way, schools break up and reduce the pluralistic meaning of literacy: *some* reading and writing skills and practices are selected rather than others, and then organized in sets, ordered, and made measurable through a process of tests and evaluations both standardized and informal. Literacy is, therefore, closely coupled with skills and practices acquired through bureaucratically organized schooling, and displayed in literacy test scores. The consequence is a narrow school-defined concept of literacy, differentiated from out-of-school literacy skills and practices - a *schooled literacy*, in Cook-Gumperz (1986) words:

> Literacy has become redefined within the context of schooling and has turned into what we now refer to as schooled literacy, that is, a system of decontextualised knowledge validated through test performances. (p. 41)

This linkage of literacy to schooling *controls* rather than *expands* literacy, and its effects on literacy assessment and measurement are significant, although not the same in developed and developing countries.

In developed countries, where school systems are highly organized, *schooled literacy* is generally translated into established standards of normal progress in reading and writing, and achievements within those standards are taken as appropriate representations of literacy. Owing to the "teleological" character of the school system, these established standards of progress rely largely on standardised and/or informal tests; as a consequence, the complex and multi-faceted phenomenon of literacy is reduced to those reading and writing skills and those social uses these tests intend to assess and measure. In this way, it is the criteria underlying tests that define what literacy is, in school settings: a restricted and highly controlled concept, greatly inadequate for coping with out-of-school requirements for reading and writing skills and social practices.

This probably is an explanation (among others) of literacy still said to be a major problem among adults in developed countries, although compulsory basic education for all has practically been achieved: having achieved a *schooled literacy*, adults are able to perform school-based literacy tasks, but unable to cope with everyday uses of literacy associated with nonschool contexts. For example: Kirsch & Jungeblut (1990) claim that the literacy problem for young adults in North America reflects restricted information-processing skills and strategies needed to successfully cope with the broad array of tasks adults face at work, at home, an in their communities; similarly, an analysis of young adults' literacy in Britain (ALBSU, 1987) reports that they experience difficulties in daily life and in connection with work, suggesting that perhaps the school-based definition of literacy is somewhat at odds with what matters to people in their everyday lives.

In developing countries, the effects of the linkage between schooling and literacy are quite different.

First, most developing countries are far from attaining basic education for all, and obviously this fact has far-reaching implications for literacy measurement and even for a concept of literacy. On the one hand, as it is schooling, in contemporary societies, that enables and insures literacy, school systems' incapacity to provide universal schooling results in high illiteracy rates: almost all the world's illiterate population is found in the developing countries, while the amount of illiteracy in developed countries can be considered to be negligible (Unesco, 1990, p. 4). On the other hand, and as a consequence of illiteracy arising from lack of schooling, the concept of illiteracy in developing countries is quite different from the same concept in developed countries: in developed countries, to be illiterate means *to have difficulty* in using reading and writing; in

developing countries, to be illiterate means *to be unable* to read or write. Hence, while in developed countries *literacy* is a major problem, not illiteracy, as Kirsch & Jungeblut (1990) put it, in developing countries, on the contrary, *illiteracy* is a major problem, not literacy.

Secondly, in developing countries, although school systems are highly regulated, their adherence to regulations is not carefully monitored, so patterns of educational progress are difficult to ascertain. In this way, absence of commonly established literacy standards gives rise to vague and haphazard criteria for assessing and measuring it, so that students of similar age or grade exhibit a wide variation of abilities and rather different levels of *schooled literacy*. As a rule, schools' literacy standards in developing countries vary according to the students social and/or economic status within societies strikingly divided into classes: standards are generally considerably higher for upper-class students. Becoming literate in upper-class schools is, then, quite different from becoming literate in working-class schools; in fact, working-class students are under-educated and sub-literate in comparison with upper-class students. In this way, as Lankshear (1987) points out, "transmission and practice of literacy in school contributes to maintaining patterns of unequal power and advantage within the social structure" (p. 131)[8].

In sum, two main points may be made with respect to literacy assessment and measurement in school settings. The first is concerned with the concept of *schooled literacy* which stems from school-defined criteria for assessing and measuring literacy: a narrow concept, generally insufficient for fulfilling out-of-school requirements for reading and writing skills and social practices. The second point involves the different educational and social effects of this *schooled literacy* in developed and developing countries: in developed countries, highly organized school systems prescribe strict and universal standards of normative progress in literacy, while in developing countries loose and discriminatory school functioning generates multiple and differentiated patterns of literacy achievement.

These points have a significant influence on the definition of criteria for assessing and measuring literacy in census surveys, as discussed below.

Literacy assessment and measurement in censuses surveys

Having argued that a common concept of literacy is not feasible, both in society as a whole and in school settings, does not imply that it is not necessary; in fact, a precise definition is crucial in large-scale literacy data collection programmes, as in the case of national population censuses.

The issue here is that although literacy, as observed above, is not something people either have or lack - it is continuously distributed, ranging from the most elementary to well-developed reading and writing skills and social uses - in census surveys practical concerns dictate that it be treated as a discrete not a continuous variable. Because one of the purposes of population censuses is to provide statistical information concerning literacy and illiteracy, survey assessment instruments cannot avoid stipulating a cut-off point on the continuum of literacy which will distinguish literate from illiterate persons, and then cannot escape using the misleading dichotomy "literate" versus "illiterate".

Traditionally, censuses surveys gather data on literacy and illiteracy through two main procedures: self-assessment, that is, self-reported information on being literate or illiterate, and grade completion, that is, information on formal schooling achievement. Definition of literacy and criteria to assess it vary greatly, as they depend upon the particular point along the literacy continuum chosen to be used as the benchmark for distinguishing literate from illiterate individuals.

---

8. *In fact, Lankshear is concerned not exactly with developing countries, but with modern capitalist societies; nevertheless, although the problem is certainly not limited to developing countries, it is undoubtedly more acute within them.*

In fact, the decision on which particular point to choose is strongly determined by the society's historical stage, that is, by its specific cultural, social and economic conditions, and is not independent of the actual practices in which literacy is employed and by which it is transmitted within these conditions. In this way, the cut-off point chosen to distinguish the "literate" from the "illiterate" varies from society to society: persons classified as literate in one country would not be so in another country. Moreover, in the same country, the concept of literate and illiterate varies over time: to the extent social and economic conditions change, expectations concerning literacy change as well, and persons classified as literate at one time may not be so classified at another time.

The very choice between gathering data through self-assessment or grade completion is contingent on the society's social and economic development level, and consequently on its school system.

Developing countries generally opt for gathering census data on literacy through a self-assessment procedure: self-reported information on being literate or illiterate is deemed adequate, first because literacy-related social practices are not widespread enough in the population, secondly because universal and compulsory basic education has still not been fully achieved, and thirdly because the school systems are loosely organized and not closely monitored, so that there is little agreement as to the meaning of grade completion.

Developed countries, on the contrary, commonly use grade completion for gathering data on population literacy level: some years of formal schooling achievement are deemed necessary to identify the literate population because social life requires literacy skills and practices on numerous and quite different occasions, compulsory basic education for all has practically been attained, and school systems are highly organized.

Nevertheless, both self-assessment and grade completion are not unproblematic procedures in gathering data on literacy, as discussed below.

Self-assessment

Self-assessed information on literacy collected by national population censuses is induced by asking the individuals one or more questions which reflect a predetermined definition of literacy. Nevertheless, despite the attempt to insure the reliability of data by linking the questions asked to a previously agreed definition, self-reported information on literacy suffers from some serious drawbacks.

The first drawback is the widespread misapplication of the particular definition according to which census questions on literacy should be administered and answers should be interpreted. While different countries utilize different definitions, the primary source is invariably Unesco's recommendation: "a person is literate who can with understanding both read and write a short simple statement on his everyday life" (Unesco, 1978a). However, the use of this basic definition for self-assessment purposes is not unproblematic: how to translate it into one or more brief questions to be included in a census survey?

To avoid this problem, in most countries the census question on literacy is simply whether the individual is able to read and write ("Can you read and write?"), with reference neither to *what* the person is expected to read and write, nor to understanding of what is read or written; as a result, the meaning of the respondent's "yes" or "no" answer to the question is at best dubious[9]. As a 1989 United Nations technical study on literacy assessment remarks:

> How to determine whether the response includes the concept of "with understanding" restricted to "a short simple statement on his/her everyday life" is a

---

9. *A further problem arises in multilingual and multiliterate societies: which languages/literacies should be assessed and measured? For a discussion on this issue, see Wagner (1990), United Nations (1989), Unesco (1978b).*

different and complex matter. Frequently, it is simply assumed to be the case; occasionally, the question(s) specify an ambiguous context as in: "Can you read a simple message?" (United Nations, 1989, p. 85)

In Brazil, for example, the interviewer's instruction manual includes the definition of "literate" to be used in the census survey, actually a simplified version of Unesco's definition: a person is to be considered literate if he/she is able to read and write a simple message in his/her own language (IBGE, 1991). In practice, however, census takers generally do not adhere strictly to instructions, and rely exclusively on the respondent's "yes" or "no" answer to the abbreviated questionnaire question: "Can you read and write?" One of the reasons for giving up the agreed definition is probably the difficulty of deciding what exactly it means: how long should "a simple message" be? how many information units should it have? at what level of proficiency should it be read or written? what is meant by "with understanding"? etc.

A second drawback is the impossibility of making important distinctions in terms of skills and processes (e.g. reading versus writing; decoding as different from comprehending and interpreting; transcribing sound units as different from conveying meaning to a potential reader) on the basis of "yes" or "no" answers to a question on the respondent's ability to read and write. In fact, "yes" or "no" answers to questions asking for self-assessed information on being literate or illiterate rely fundamentally on the respondent's evaluation of his/her own literacy abilities, skills and practices. And an important point must be stressed here: this evaluation is frequently highly influenced by a school-defined concept of literacy, because in contemporary societies, as discussed above, schools are "arbiters of literacy standards" (Cook-Gumperz, 1986, p. 34), so that the respondent tends to describe himself/herself as literate or illiterate within the framework of literacy skills and practices typically taught and measured in school settings, that is, according to a *schooled literacy*, not according to skills and practices learned and actually used in out-of-school everyday life[10].

A further consideration is that self-assessment questions in census surveys generally are not put directly to each individual, but are answered by the head of the household (or by the person who agrees to speak for him/her), on behalf of all other members. Thus, the classification of individuals as "literate" or "illiterate" bears on the respondent's evaluation not only of his/her own literacy abilities, but also on his/her estimation of the other members of the household literacy abilities: to what extent the respondent perceives himself/herself and the others as lacking the necessary skills to be considered literate?

Finally, respondents' answers to census questions on literacy may misrepresent their real literacy status, owing to social and psychological inhibitions and prestige attitudes. As respondents are frequently suspicious of the census takers' motives, *desirable* answers may take the place of *sincere* answers; for example, illiterate people are often unwilling to admit they cannot read and write for fear of admiting this failing to a stranger, particularly one holding a position of authority; or, on the contrary, literate people may affirm they cannot read or write for fear of being subjected to some direct measurement. As Schofield (1968) put it:

> Like most modern investigations of literacy, the figures in these reports (statistical reports) are measurements of people's opinions of their literary abilities, as expressed to strangers, and not direct evidence of the existence of these abilities. The dangers of misrepresentation in such cases, especially where status is involved with the possession of literacy skills, hardly need stressing. (p. 319)

In light of these considerations, we may conclude that despite censuses attempts to insure reliability of data, self-assessed information on literacy is likely to be rather inaccurate. The main reason is that the cut-off point which should distinguish literate from illiterate persons, along the literacy continuum, varies widely, in census surveys, because the distinction depends upon

---

10. Even in Third World countries, although basic education for all is not yet attained, the vast majority of the population has some contact with primary schooling, so that the schools' parameters for evaluating literacy are generally well known and widely internalized.

diverse and often discrepant factors: census takers' application (or misapplication) of a predetermined definition trying to specify the cut-off point; the respondents' own decision about the cut-off point, when describing both himself/herself and other household members as literate or illiterate; psychological and social aspects concerning literacy status in society.

These well-known shortcomings of self-reported information on literacy have led to the alternative procedure of estimating literacy skills and practices on the basis of school attendance and grade completion.

Grade completion

Defining, assessing and measuring literacy in terms of years of schooling has some conceptual advantages over doing it on the basis of self-assessment.

The main issue is that while self-assessment rests essentially on the supposition that there is a specific point on a single scale separating the "literate" from the "illiterate", a grade completion criterion, although used as well to distinguish "literate" from "illiterate" in large-scale literacy data collection, as is the case with census surveys, carries with it recognition of literacy as being a range or continuum of abilities and practices, in a way evading the artificial dichotomy of literacy versus illiteracy. In fact, to assess and measure literacy by completed years of primary school is to recognize that individuals move from illiteracy to literacy gradually over a period of time, and through various stages.

A further advantage of assessing literacy in terms of years of schooling is that the responsibility for classifying individuals as "literate" or "illiterate" is here transferred to a probably more trustworthy arbiter: while self-assessed information relies basically on the respondent's evaluation of his/her own literacy abilities, as discussed above, a grade completion criterion attributes this evaluation to the school system, in this way getting presumably closer to an unbiased appraisal.

Nevertheless, grade completion as a criterion for assessing and measuring literacy poses a crucial problem: it is necessary to select a grade to be the boundary line where illiteracy becomes literacy, and this selection is inescapably arbitrary. Hillerich (1978) expresses this problem in the following terms:

If a given number of years in school is accepted as the basis for literacy, one needs merely to pick the grade level that will be used as the criterion. That decision may be made in terms of the number of illiterates one wants to claim - the higher the grade designated for literacy, obviously the more "illiterates" identified. Or the designated grade may be chosen on the basis of some assumed "necessary" level for adult success. (p. 31)

The following data concerning estimates of literacy in the United States, provided by Newman & Beverstock (1990)[11], support Hillerich's argument: the data illustrate the selection of grade levels both in terms of the number of illiterates one wants to claim, and in terms of an assumed "necessary" level for adult success:

> In the 1930s the Civilian Conservation Corps used completion of third grade as its standard for literacy. At the beginning of World War II, the completion of the fourth grade was declared sufficient literacy for entry into the Army. However, as the war continued, literacy requirements were discontinued so that sufficient numbers of soldiers could be inducted. The special 1947 census set literacy at 5 years of schooling, and 13.5 percent of the male population could not meet that standard. The 1949 census used the fifth grade, and the 1952 census, the sixth grade. In the 1960s the United States Office of Education set literacy at 8 years of

---

11 *The source of the data presented by Newman & Beverstock is: McGrail, J. (1984). Adult Illiterates and Adult Literacy Programs: A Summary of Descriptive Data. San Francisco, CA: National Adult Literacy Project, Far West Laboratory.*

> schooling. With 9 years of schooling as the minimum for literacy, the 1980 census yielded 24 million people aged 25 years and older who were illiterate - 18 percent of the people in this age group. But with 12 years of school as the minimum, the same census found 45 million people, or 34 percent, illiterate. (p. 57)

As the data make clear, the number of school years required to reach literacy can increase over time: as society becomes more complex, new demands are placed upon literate behaviour, and consequently a higher level of schooling is required. Moreover, the selection of a grade as the boundary line between illiteracy and literacy depends upon the purposes of assessment and measurement, that is, upon what is judged to be necessary according to expected effects. Finally, and obviously, one can claim any number of illiterates, only by picking different grade levels as the criterion.

Beyond the arbitrariness of designating a grade level and deciding that above it is "literacy", below it is "illiteracy" (Hillerich, 1978, p. 33), a grade completion criterion to assess literacy conceals some equivocal assumptions.

First, the use of a grade completion criterion to assess literacy in census surveys presupposes that universal and compulsory basic education is adequately provided, so that every individual has the opportunity to enter the school grade system. Moreover, this system must be highly organized, to permit assuming that the nature and quality of schooling is sufficiently uniform between schools, and that the same level of literacy is attained in the same amount of years in different schools.

This is certainly not the case in developing countries, where grade completion as a criterion in assessing literacy has little validity, because basic education for all is not yet provided, and school organization and control are generally so precarious that large portions of children who succeed in going to school either quit it before completing two or three years of primary schooling or repeat several times the same grade (generally the first grade)[12].Moreover, in developing countries, precisely because of failure and consequent repetition, completion of, say, fourth grade (generally selected as the boundary line between illiteracy and literacy) frequently means as many as eight or ten years of schooling.

Even in developed countries, where school systems usually submit to established standards of progress from grade to grade, it is not unproblematic to assume uniformity of schooling between schools, wrongly equalizing schooling processes, teachers' capabilities, students' potentialities, and community values placed on literacy. As Oxenham (1980) remarks:

> ... while four years of schooling in some schools of some countries might enable most students to become adequately and permanently literate, the same dose elsewhere might result simply in relapses into illiteracy. (p. 90)

A second assumption underlying a grade completion criterion for assessing and measuring literacy is a presumed relationship between educational attainment and literacy skills and practices, or, in other words, a supposition that literacy is what schools teach and measure, and therefore is acquired basically through schooling. Despite the fact that this assumption ignores learning through informal means throughout life, in out-of-school situations, there is stronger evidence that it is a questionable assumption.

First, although the hypothesis that a specific grade-level-completed equates with literacy has received a rather small amount of attention, some empirical studies suggests that it is not supported: Harman (1970), Kirsch & Guthrie (1977-1978), Hillerich (1978), Wagner (1991) report research results suggesting a very weak relation between the grade-level criterion and adult literacy competence.

---

12 *Brazil is a case in point: only about 50 per cent of seven year old Brazilian children enrolled in first grade progress to the next grade; the other 50 per cent drop out or repeat the grade.*

Secondly, a cause-and-effect link between schooling and literacy is undermined by the fact that illiteracy (functional illiteracy) continues to be a major problem in countries where compulsory basic education for all is practically attained, as is the case with developed countries. If a specific grade-level-completed equals literacy, why do significant levels of illiteracy exist in societies where school systems are being continually expanded?

This apparent paradox is dispelled by the fact that schools, as discussed above, assess and measure literacy according to performance demands of internally defined evaluation instruments, generally not taking into account externally required literacy abilities. Actually, literacy skills and practices in other social contexts seem to go far beyond reading and writing skills taught and measured in school settings, that is, far beyond a *schooled literacy*. The consequence, as De Castell et al. (1986) put it, is "a significant discrepancy between what counts as literacy in the school, and the actual kinds of literate competence useful in community and occupational activities". (p. 7) In other words, through schooling people might become able to perform school-based literacy tasks, but might remain unable to cope with everyday uses of literacy in nonschool settings - at home, at work, and within their social context. In fact, the term "functional literacy" was coined exactly to broaden the concept of school-based literacy, adding to it the everyday literate behaviours that formal learning in school settings does not seem to elicit.

A number of studies have provided support for this argument. For example: Heath's ethnographic studies (1983) indicate that reading and writing activities in school settings remain highly irrelevant to out-of-school situations; in the same vein, Wagner's research on functional literacy in Moroccan school children (1991) led to the following conclusion:

> The present study supports a growing body of evidence indicating that many of the literacy skills called for in everyday life may not be acquired even after the 4 years of formal schooling conventionally (or conveniently) used as the dividing line between literacy and illiteracy. (p. 193)

The assumption that there is a reliable relationship between grade completion and literacy is, therefore, undoubtedly equivocal

Equally equivocal is a third assumption that underlies a grade completion criterion for assessing and measuring literacy: the assumption that completion of a particular grade will ensure permanent literacy and that what has been acquired will not be lost.

This assumption fails to take into account important issues, such as the validity of arbitrarily picking a specific school grade as the threshold of minimum learning that might prevent reversion to illiteracy, or the potential loss of literacy skills through disuse. The elucidation of these issues depends upon empirical information not yet available, as Wagner (1990) remarks:

> While hypotheses abound concerning the minimum amount of primary schooling (or nonformal education or campaign experience) necessary for literacy to be "fixed" in the child or adult, little reliable information is currently available. (p. 131)

In fact, literacy retention has not been studied in much detail, and the amount of research on this issue is amazingly small. Moreover, the results provided by this small amount of empirical studies are far from being conclusive, and the possibility of generalization is restricted.

Simmons (1976), reviewing six retention-of-literacy studies that, according to him, seemed to comprise the literature on retention, summarizes the results concluding that: first, "the studies consistently indicate a decline in literacy skills over time"; second, "high levels of previous education are not a guarantee that people will not lapse into illiteracy"; and finally, "even what is retained appears to have little practical value to the individual or the society" (p. 84). Simmons' own study suggests that the assumption of permanent effects of basic education has to be questioned, and that "the reason that some individuals retain more than others appears to be more

a factor of family background and post-school use of cognitive skills than it is a factor of the school experience" (Simmons, 1976, p. 92).

In contrast, a recent longitudinal study by Wagner, Spratt & Klein (in press) "do not support the hypothesis of literacy "relapse" or loss of academic/cognitive skills after five grades of primary schooling" (p. 2); according to the authors, the study "provides some of the first evidence that "literacy relapse" may be a myth"(p. 11).

These contrc /ersial results of empirical studies on literacy retention suggest, then, that assuming completion of a particular grade as evidence of literacy is at present questionable.

In sum, while a grade completion criterion in assessing and measuring literacy has some conceptual advantages over self-assessment criteria, it poses serious problems and relies on either equivocal or controversial assumptions. Moreover, the extent to which individuals completing a specific grade become properly and permanently literate is an issue still open to further inquiry.

We may conclude that the self-assessed and grade completion information provided in censuses is only a very crude measure of literacy. One procedure for assessing and measuring both literacy skills and social practices in greater depth is the special sample literacy survey, as discussed below.

Literacy assessment and measurement in special surveys

By assessing literacy in terms of a representative population sample's actual competencies, a special survey, that is, a literacy survey undertaken at the household level, is a means of securing a more accurate view of the extent and quality of literacy in the population.

Collecting data on literacy in census surveys is designed to provide, among much other information on demographic, social and socioeconomic characteristics, a generic indicator of the extent of literacy in the entire national population; special surveys of literacy, on the contrary, are aimed at gathering a broad range of specific information on actual literacy skills and social practices. As a result, while a census survey assesses and measures literacy superficially, because it cannot make use of more than one or two very brief self-assessment questions, or of a simple grade completion criterion, a household survey can assess and measure in depth both literacy skills, through direct testing, and everyday uses of literacy, through structured questionnaires. Household literacy surveys may then provide data on both dimensions of literacy discussed earlier: the *individual* dimension, that is, literacy as personal possession of reading and writing skills, and the *social* dimension, that is, literacy as social practices involving reading and writing.

Moreover, as a household literacy survey simultaneously provides data on educational attainment as a whole, and on socioeconomic and cultural characteristics of the household, it permits literacy skills and social practices to be related clearly to a number of other factors, such as age, sex, race, income, rural/urban residence, cultural environment, and region of the country (United Nations, 1989, p. 10). In this way, special surveys on literacy provide data not only for estimating literacy levels but also, and chiefly, for formulating educational policy and implementing literacy programmes[13].

In fact, the focus of household literacy surveys is on *functional literacy*; rather than seeing literacy as a characteristic people either have or lack, as is the case with census surveys, household surveys are concerned with the effectiveness of people's actual reading and writing skills, and with the nature and frequency of their participation in literacy-related social practices. Therefore household literacy surveys are designed to assess and measure thresholds of literacy competence higher than the basic threshold of simply being able to read and write.

---

13 *A discussion of household literacy surveys' potential uses is beyond the scope of this study; a detailed discussion is available in the 1989 United Nations' technical study on literacy assessment through household surveys (United Nations, 1989); see also Wagner (1990).*

As a consequence, the need to assess and measure literacy through household surveys is recognized chiefly in countries where this basic literacy threshold is already attained by virtually everybody, so as to foster achievement of more complex reading and writing skills, as well as abilities to use literacy in more varied social settings. The 1991 World Education Report (Unesco, 1991) supports such a view:

> Notwithstanding the diversity of literacy thresholds, a majority of countries in the world still have significant proportions of their populations below even the original threshold of being able, with understanding, to read and write a short simple statement on one's everyday life. That the latter threshold continues to be the major focus of concern in a majority of countries emerged clearly from the replies to the questionnaire of the International Bureau of Education (IBE) on current trends in primary education and adult literacy work that was circulated to UNESCO's Member States on the occasion of the 42nd session of the International Conference on Education (Geneva, September 1990). Most replies agreed that the original 1958 definition of an illiterate person was still relevant in their country; a smaller proportion agreed that the notion of a "functional illiterate" is "perceived and defined as a specific category". (p. 47-48)

This explains why household literacy surveys have been implemented mainly in countries where the notion of a functional illiterate is "perceived and defined as a specific category", that is, in developed countries. In the United States, for example, a significant number of special literacy surveys have been developed during the last two decades (for a critical review, see Kirsch & Guthrie, 1977-1978; Newman & Beverstock, 1990). On the contrary, in developing countries, where large proportions of the population have not reached even the basic literacy threshold of merely being able to read and write, studies of functional literacy through household surveys are scarce, probably because they are still considered superfluous[14].

A further consideration is that, although a household literacy survey provides information on a broad range of literacy skills and practices, it is not to be assumed that it fully overcomes the arbitrariness of electing cut-off points along the literacy continuum to distinguish levels of literacy. As discussed earlier, literacy consists of a large number of different skills, cognitive and metacognitive abilities, applied to a wide array of reading materials and writing genres, and refers to a variety of different literacy activities, practiced in distinct social settings. The measurement instruments used in household literacy surveys (tests and questionnaires) cannot, then, avoid selecting a *sample* of behaviours deemed to be representative of the wide variety of literacy skills and practices. As a consequence, estimates of literacy through household surveys "vary as widely as the measures employed" (Kirsch & Guthrie, 1977-1978, p. 504). Newman & Beverstock (1990) refer to studies attempting to assess and measure functional literacy in the United States, in the 1970s and 1980s, in the following terms:

> The studies varied, and so did their results. The estimates ranged from 13 percent to over 50 percent of the adult U.S. population having some difficulty with basic literacy. Depending on who is talking, and which study is cited, the United States has a low literacy rate, a high literacy rate, or a rate somewhere in between. (p. 49)

The lack of congruence as to what should be measured when assessing functional literacy can be illustrated by comparing the frameworks for measuring literacy assumed by two recent studies: the National Assessment of Educational Progress (NAEP)'s study of America's young adults'

---

14 *The recent United Nations technical study on literacy assessment through household surveys (United Nations, 1989), intended to help developing countries with a step by step account of how to plan, conduct and execute a household literacy survey, tacitly recognizing these countries, inexperience and unfamiliarity with this kind of survey. In fact, developing countries' main challenge is still how to plan, conduct and execute national literacy programmes and campaigns aimed to eliminate persistent high rates of complete illiteracy.*

literacy (Kirsch & Jungeblut, 1990), and the United Nations' technical study on literacy assessment through household surveys (National Household Survey Capability Programme (NHSCP), United Nations, *1989*).

Both frameworks propose a matrix of literacy skills with types of reading or writing materials, but the criteria to select categories of skills and of reading or writing materials are quite distinct.

In relation to literacy skills, while NAEP's categories refer to *uses* of literacy, that is, to the *type of information* individuals need when reading or writing, NHSCP's categories refer to the *basic processes* involved in reading and writing. In this way, the NAEP's matrix includes, as categories of uses of literacy , *knowledge, evaluation, specific information, social interaction, application*, while the NHSCP's matrix includes, as types of literacy skills, *decoding, comprehension, writing, locating information*.

Similarly, in relation to reading and writing materials, while the NAEP's categories refer to the *linguistic form* in which the information is displayed, the NHSCP's categories refer to the *domains* in which literacy skills are applied. The NAEP matrix includes, then, the following categories of reading or writing materials: *sign/label, directions, memo/letter, form, table, graph, prose, index/reference, notice, schematic or diagram, advertisement*, and *bill/invoice*; working on a different criterion, the NHSCP's matrix includes no more than three types of text domains: *words/sentences, prose, documents*.

It is important to note that this lack of congruence between distinct ways of breaking literacy up into specific components for direct testing is due to the requirement that all direct testing instruments must comply with: the inescapable need of selecting, in the universe of behaviours one wants to assess and measure, a set of behaviours to be sampled by the test items. As the determination of this set of behaviours depends upon the test's purposes and context, different purposes and contexts result in different sampling procedures.

When one is concerned with direct testing of literacy, selecting a sample of literacy skills and practices depends upon such factors as the concept of literacy adopted, the purposes of literacy assessment and measurement, as well as the cultural and socioeconomic context.

Differences between the two studies discussed above can then be explained by their different purposes and contexts. The purpose of the NAEP's study was to describe the nature and the extent of literacy problems facing young adults living in a developed country where the concept of literacy is basically, as the study itself states, "using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential" (Kirsch & Jungeblut, 1990, p. I-8). On the other hand, the NHSCP's study was designed principally for literacy policy and programming purposes in developing countries where, as noted earlier, literacy is still defined as the elementary ability to read and write, and functional literacy is not yet perceived as a specific category.

A final and important point must be stressed concerning the use of household literacy surveys. The basic dichotomy literate-illiterate can certainly be utilized here - the English Language Proficiency Survey (Barnes, 1986)[15] used it; the United Nations' technical study on literacy assessment even *recommends* that developing countries use it in household literacy surveys (United Nations, 1989, p. 89). Nevertheless, as the United Nations study itself remarks, this basic dichotomy "may yield insufficient detail on literacy levels and abilities", and "the direct measurement of literacy skills using assessment instruments provides information for more refined categories than available in simple self-assessment" (United Nations, 1989, p. 156, 159). As a case in point, the just-mentioned United Nations study on literacy assessment suggests the following categories as a possible classification of literacy levels to be assessed through household

---

15 BARNES, R. (1986). Adult Illiteracy Estimates for States. Washington, DC: US Department of Education. Quoted in: Newman & Beverstock, 1990, p. 73-75.

surveys: *non-literate, low literate, moderate literate, high literate* (United Nations, 1989, p. 159-160; see also Wagner, 1990, p. 122).

The following two classifications, both included in studies concerned with direct measurement through literacy surveys, are additional examples of "more refined categories", surpassing the hard-to-maintain dichotomy literate-illiterate: *likely survival literacy, marginal survival literacy, questionable survival literacy, low survival literacy* (Harris, 1970)[16]; *functionally incompetent, marginally functional, functionally proficient* (Adult Performance Level Study, 1977)[17].

A more sophisticated example is provided by Kirsch & Guthrie's (1990) study of America's young adults' literacy levels. Literacy tasks included in the measurement instrument were related to three literacy scales, and organized, in each scale, according to various levels of difficulty, so that assessment of various types and levels of literacy proficiency was provided. The aim was to "profile" rather than to "classify" individuals, according to performance along each scale and across the three scales. Kirsch & Guthrie express the assumption underlying their approach to literacy assessment and measurement in the following terms:

> What is needed is an approach that explicitly provides a means for understanding the various types and levels of literacy proficiency achieved within our society. Such an approach would provide a more accurate representation not only of the complex nature of literacy demands within a pluralistic society but also of the status of people functioning in our society. (p. III-36)

Actually, this assumption underlies household literacy surveys in general. Allowing for a multidimensional approach to literacy, and assessing literacy skills and practices through direct measurement, household literacy surveys can provide more refined and more reliable data on the extent and nature of literacy in the population than other data collection procedures.

---

16 *HARRIS, L. & Associates (1970). Survival Literacy Study. Washington, DC: National Reading Council. Quoted in: Newman & Beverstock, 1990, p. 65; see also Kirsch & Guthrie, 1977-1978, p. 497.*

17 *US OFFICE OF EDUCATION (1977). Final Report: The American Performance Level Study. Washington, DC: US Office of Education, Department of Health, Education and Welfare. Quoted in: Newman & Beverstock, 1990, p. 69-70; see also Kirsch & Guthrie, 1977-1978, p. 499.*

3. LITERACY ASSESSMENT AND MEASUREMENT: A CHALLENGING ENTERPRISE

This study was intended to shed light on literacy assessment and statistical measurement as they relate to concepts of literacy; actually, it raises more questions than it answers.

It is now readily apparent that assessing and measuring literacy is a highly difficult and complex task: it requires a precise definition of literacy to be used as a yardstick, but any attempt to meet this requirement raises severe epistemological problems. As discussed earlier, literacy is a continuous, not a discrete, dichotomous variable; it refers to multiple reading and multiple writing skills which must apply to a wide range of reading and writing materials, and comprises different practices which depend upon the nature, structure and aspirations of a given society. In sum, literacy is a "many-meaninged thing" (Scribner, 1984, p. 9); a consensual agreement on one single definition of it is quite impossible.

Nevertheless, the lack of agreement as to what literacy is - and therefore the lack of agreement as to what should be assessed and measured - does not eliminate the need for and importance of literacy assessment and measurement, as a means of providing literacy data required for a variety of theoretical and practical purposes. At least three major arguments support the need for generating literacy indices through assessment and measurement.

First, the literacy index of a population or sub-population is one of the basic indicators of a country's or a community's progress. Obviously, as discussed earlier, the argument is not that a literacy index taken by itself represents a country's or a community's economic, social and cultural level; actually, the assumption which underlies this statement - the assumption that literacy leads to economic growth and social progress - has no empirical support, as historical and ethnographic research has repeatedly demonstrated. As Wagner (1990, p. 116) put it, the implication of causality when relating literacy to economic indicators, although still common, is hazardous:

> On the contrary, one would probably be just as correct in claiming that literacy rates, like infant mortality rates, *reflect* the degree of economic development in most countries. If social and economic progress is being attained, one usually finds that literacy rates climb and infant mortality rates drop. Blaug, once a supporter of human capital theory, has since come to the conclusion that *neither years of schooling nor specific literacy rates have any direct effect on economic growth in developing countries*. (emphasis added)

Nevertheless, although literacy is now conceptualized more as a dependent than as an independent variable (Graff, 1987a), it is undoubtedly associated with many of the other indicators of social and economic development. Correlating literacy rates and socioeconomic indicators such as gross national product, infant mortality rates, fertility rates, nutrition rates, among the many, illuminates the overall economic, social and cultural status of a country or community, evidencing, for example, that illiteracy and poverty go hand in hand, as is the case with Third-World countries.

A second argument supporting the need for literacy indices provided by assessment and measurement is closely connected with the first. Literacy indices are extremely useful for comparative purposes, so responding to a major national and international concern about comparability of economic and social data.

On the one hand, literacy rates can be used for evaluating and interpreting changes in literacy/illiteracy over time, on the basis of data from a series of surveys. The possibility of such historical comparisons is crucial not only for historical research but also for studying and comprehending literacy in the present, and judging its diffusion over time. As Graff (1987a, p. 32) remarks:

> ... the proper study of the historical experience of literacy has more than antiquarian interest; it has much to tell that is relevant to policy analysis and policy making in the world in which we live today.

Obviously, the measurement of the extent and distribution of reading and writing, providing quantitative levels of literacy's diffusion across time, is not the only nor even the main source for the "study of the historical experience of literacy", but it certainly supplies some significant and systematic evidence.

On the other hand, literacy rates are utilized for comparisons at a given point in time, providing data for considering the distribution of reading and writing skills and practices by geographic or economic regions of the world or of a particular country. Literacy rates are then useful for identifying trends and prospects at the international and national level, for confronting the magnitude of the problem of illiteracy in different countries or regions, for comparing and contrasting different populations or groups across the world or across regions, highlighting disparities in literacy achievement according to factors which may be considered determinants of literacy such as age, sex, ethnicity, rural/urban residence, etc.

Finally, a third argument supporting the need for literacy assessment and measurement is the fact that literacy indices are essential both to formulating policies and to planning, implementing and monitoring programmes, not only literacy but also social welfare programmes in general. According to the United Nations technical study on literacy assessment (United Nations, 1989, p. 8):

> To measure the extent of literacy in the national population is one step in assessing the effectiveness of current programmes and offering accurate data for shaping future programmes in the educational and social fields. For example, projects in primary health care will be influenced by the degree of literacy in the target population.

Given the above remarks, a paradox arises: on the one hand, the importance and necessity of literacy assessment and measurement, for theoretical and practical purposes; on the other hand, the impossibility of fulfilling the prerequisite for assessing and measuring it, that is, a precise definition to be used as a yardstick. How to face this paradox?

Initially, a central point must be stressed: the assumption that literacy cannot be assessed and measured in an absolute manner must be clear. As it is not feasible to "discover" a definitive and unequivocal definition of literacy, or the *one best* way of defining it, any literacy assessment or measurement will be relative, depending upon *what* (which reading and/or writing skills and/or literacy social practices) is being assessed or measured, *why* (for what purposes), *when* (at which time) and *where* (in which socioeconomic and cultural context) is it being assessed or measured, and *how* (by which criterion) is it assessed or measured.

What is then *possible* and *necessary* for carrying out any literacy assessment or measurement is to define the phenomenon being assessed or measured on an *ad hoc* basis, then establishing a precise interpretative framework to serve particular purposes in a specific context. Because a common, universal definition is not feasible, a deliberately *operational* definition, even if it is arbitrary, is both possible and extremely necessary to meet the practical requirements of assessment and measurement procedures. In this way, we can anticipate as many operational approaches to measuring literacy as literacy assessment or measurement programmes. In other words, recognition of the multiple meanings of literacy argues for a diversity of operational definitions, each one meeting the requirements of a specific assessment or measurement programme.

The crucial issue, then, in assessing and measuring literacy is to determine clearly the operational definition on which these processes will be based, and to design instruments for the collection of information according to this definition.

In school settings, this procedure is facilitated by the fact, as noted earlier, that schools can assess and measure proficiency at different points of the literacy continuum and in different occasions during schooling. In this way, schools can deal with several different operational definitions of literacy, each one being utilized for assessing and measuring particular skills and practices at specific stages of the schooling process. The problem here is to avoid either literacy being vaguely defined and variously measured, as is often the case with developing countries, or literacy being reduced to a school-based concept, far removed from out-of-school literacy requirements, as frequently occurs in developed countries. In fact, the structure of formal basic education largely determines the extent and nature of literacy skills and practices that can be acquired; discussing operational definitions of literacy for the purpose of literacy assessment and measurement in school settings presupposes, then, discussing the nature and quality of universal primary schooling.

While in school settings it is possible to assess literacy repeatedly and progressively, and therefore to use several different operational definitions of it, a national census survey, relying on one single assessment situation, and on one single assessment instrument, must rely on a unique definition of literacy.

When the criterion is grade completion, the definition of literacy as well as its assessment and measurement are ascribed to the school system, and then depend upon the use or misuse, in school settings, of operational definitions of literacy and of assessment and measurement instruments which originate in them. It is thus useless to use a grade completion criterion without relating it to the structure and quality of formal basic education.

It is when census data are gathered through self-assessment that an operational definition and its translation into one or two questions are critical issues. As discussed earlier, a serious drawback of self-reported information on literacy is the misapplication of the definition according to which census questions on literacy should be administered. To the extent that this definition generally is not *operationally* formulated, the questions used to assess it are vague and imprecise, generating dubious and unreliable answers. Basic concerns about the use of self-assessment for literacy assessment and measurement purposes, in national census surveys, must be, then, first and foremost, the formulation of an adequate operational definition expressing what constitutes a desirable level of reading and writing skills and practices, in a particular country; second, the translation of this definition into accurate and unequivocal questions; and third, the correct understanding and application of these questions by census takers.

The advantage of household literacy surveys over national census surveys is that various operational definitions of literacy can be used, instead of a single one, thus encompassing different sets both of literacy skills and of literacy practices. In this way, different kinds of assessment and measurement instruments can be constructed, providing finer distinctions and more refined differentiation of literacy levels. The main issue here is formulating the appropriate set of operational definitions, taking into account what really counts as literacy in some given context, then selecting an adequate sample of desired skills and social practices, and constructing instruments to accurately assess them.

The above remarks stress the possibility and necessity of formulating *operational* definitions of literacy deliberately built to meet the requirements of reliable literacy assessment and measurement, and point out both the main problems associated with this task and some precautions to be taken in carrying it out. But obtaining reliable data on literacy is not the only important question; actually, the essential question is the *interpretation* of these data.

As discussed in the previous sections, criteria commonly used to assess and measure literacy generally suffer from shortcomings and/or are often based on equivocal assumptions; to the extent that these shortcomings and assumptions are frequently unavoidable, interpretation of data on literacy must always take them into account.

Moreover, because the concept of literacy varies depending upon socioeconomic, cultural and political context, adequate interpretation of data on literacy requires knowledge of the definitions used as a framework for assessing and measuring it, as well as of the techniques of data collection.

A further consideration is that data on literacy must be related to the characteristics of the context in order to be adequately interpreted: when evaluating, comparing or contrasting data at the national or international level it is essential to analyse them in association with demographic, socioeconomic, cultural and political indicators. Using an expression coined by Wagner (1990, p. 132), data on literacy must be interpreted within an analysis of the "ecology of literacy".

Finally, because the structure of formal education and the nature and quality of primary schooling greatly influences the concept of literacy, its social value, uses and functions, as well as its assessment and measurement, the interpretation of data on literacy must always take into account features of the educational system.

In sum, the set of problems involved in defining, assessing and measuring literacy discussed in this study is parallelled by a corresponding set of problems associated with interpreting data gathered through assessment and measurement. The central point here is that to face both sets of problems is not only a conceptual issue, but also an ideological and political one. Because of its purpose, this study has stressed the conceptual facet of literacy assessment and measurement, in its theoretical and practical aspects. I should therefore like to conclude by raising its challenging ideological and political facet.

Literacy is undoubtedly, at least in modern industrialized societies, an absolute human right, irrespective of the specific economic and social conditions in which a human group finds itself; data on literacy represents then the degree to which this right is distributed among and effectively achieved by the population.

Nevertheless, what literacy *is* and consequently the meaning of data on literacy, that is, data on the distribution and attainment of the right to literacy, are *relative* issues, as this study intended to demonstrate.

Some questions should therefore be posed. If literacy can be given no absolute and universal definition, should the human right to literacy have different meanings in different societies? Should assessing and measuring literacy, and interpreting the data collected, be contingent upon the circumstances of a given society? If the answer to these questions is "yes", should an "impoverished" concept of literacy, "unsophisticated" processes of assessing and measuring it, and a "benevolent" interpretation of the data collected, be one more factor contributing to maintaining inequalities between developed and underdeveloped or developing countries?

There are no "technical" answers to these questions; as Oxenham (1980, p. 85) put it when discussing similar questions, "that the word 'should' has entered the discussion, signals that we have entered the area of norms and values".

I should like to conclude by noting that the conceptual analysis of literacy and literacy assessment and measurement developed in this study is intended as a framework for the basically ideological and political tasks of formulating literacy policies and literacy development programmes.

REFERENCES

AKINNASO, F.N. (1981). The Consequences of Literacy in Pragmatic and Theoretical Perspectives. *Anthropology and Education Quarterly*, v. 12, n. 3, 163-200.

ALBSU (1987). *Literacy, Numeracy and Adults: Evidence from the National Child Development Study*. London: Adult Literacy & Basic Skills Unit.

BHOLA, H.S. (1979). *Evaluating Functional Literacy*. Amershan: Hulton Educational Publications; Tehran: International Institute for Adult Literacy Methods.

BORMUTH, J.R. (1975). Reading Literacy: its Definition and Assessment. In J.B.Carroll & J. Chall (eds.), *Toward a Literate Society*. New York: Mc-Graw-Hill.

CERVERO, R.M. (1985). Is a Common Definition of Adult Literacy Possible? *Adult Education Quarterly*, v. 36, n. 1, 50-54.

CHARNLEY, A.H. & JONES, H.A. (1979). *The Concept of Success in Adult Literacy*. London: ALBSU.

CHARTIER, A.M. & HÉBRARD, J. (1989). *Discours sur la lecture (1880-1980)*. Paris: Centre Georges-Pompidou.

CHARTIER, R., ed. (1985). *Pratiques de la lecture*. Paris: Rivages.

COOK-GUMPERZ, J. (1986). Literacy and Schooling: an Unchanging Equation? In J. Cook-Gumperz (ed.), *The Social Construction of Literacy*. Cambridge: Cambridge University Press.

deCASTELL, S., LUKE, A. & MacLENNAN, D. On Defining Literacy. In S. de Castell, A. Luke & K. Egan (eds.), *Literacy, Society, and Schooling*. Cambridge: Cambridge University Press.

FINNEGAN, R. (1988). *Literacy and Orality*. Oxford: Basil Blackwell.

FURET, F. & OZOUF, J. (1977). *Lire et écrire: l'alphabétisation des français de Calvin à Jules Ferry*. Paris: Minuit.

FREIRE, P. (1967). *Pedagogía del oprimido*. Montevideo: Tierra Nueva. (*Pedagogy of the Oppressed*. Harmondsworth: Penguin, 1972)

FREIRE, P. (1970a). The Adult Literacy Process as Cultural Action for Freedom. *Harvard Educational Review*, v. 40, n. 2, 205-225.

FREIRE, p. (1970b). Cultural Action and Conscientization. *Harvard Educational Review*, v. 40, n. 3, 452-477.

FREIRE, P. (1976). *Ação cultural para a liberdade*. Rio de Janeiro: Paz e Terra. (*Cultural Action for Freedom*. Harmondsworth: Penguin, 1973)

GOODY, J., ed. (1968). *Literacy in Traditional Societies*. Cambridge: Cambridge University Press.

GOODY, J. (1987). *The Interface between the Written and the Oral*. Cambridge: Cambridge University Press.

GRAFF, H.J. (1987a). *The Labyrinths of Literacy*. London: The Falmer Press.

GRAFF, H.J. (1987b). *The Legacies of Literacy*. Bloomington: Indiana University Press.

GRAY, W.S. (1956). *The Teaching of Reading and Writing*. Paris: Unesco.

HARMAN, D. (1970). Illiteracy: An Overview. *Harvard Educational Review*, v. 40, n. 2, 226-243.

HEATH, S.B. (1983). *Ways with Words*. Cambridge: Cambridge University Press.

HERRMANN, B.A. (1990). Cognitive and Metacognitive Goals in Reading and Writing. In G.G. Duffy (ed.), *Reading in the Middle School*. 2nd ed. Newark, DE: International Reading Association.

HILLERICH, R.L. (1978). Toward an Assessable Definition of Literacy. In L.J.Chapman & P. Czerniewska (eds.), *Reading; from Process to Practice*. London and Henley: Routledge & Kegan Paul in association with The Open University Press.

IBGE (1991). Manual do Recenseador para o X Recenseamento Geral do Brasil, 1991. Rio de Janeiro: Fundação Instituto Brasileiro de Geografia e Estatística.

JONES, P.W. (1988). *International Policies for Third World Education: Unesco, Literacy and Development*. London: Routledge.

KIRSCH, I. & GUTHRIE, J.T. (1977-1978). The Concept and Measurement of Functional Literacy. *Reading Research Quarterly*, v. 13, n. 4, 485-507.

KIRSCH, I.S. & JUNGEBLUT, A. (1990) *Literacy: Profiles of America's Young Adults*. Final Report of the National Assessment for Educational Progress, 2nd printing. Princeton, N.J.: Educational Testing Service.

LANKSHEAR, C. (1987). *Literacy, Schooling and Revolution*. New York: The Falmer Press.

LEVINE, K. (1982). Functional Literacy: Fond Illusions and False Economies. *Harvard Educational Review*, v. 52, n. 3, 249-266.

LEVINE, K. (1986). *The Social Context of Literacy*. London: Routledge & Kegan Paul.

McGILL-FRANZEN, A. & ALLINGTON, R.L. (1991). Every Child's Right: Literacy. *The Reading Teacher*, v. 45, n. 2, 86-90.

NEWMAN, A.P. & BEVERSTOCK, C. (1990). *Adult Literacy: Contexts & Challenges*. Newark, DE and Bloomington, IN: International Reading Association and ERIC, Clearing House on Reading and Communication Skills.

O'NEIL, W. (1970). Properly Literate. *Harvard Educational Review*, v. 40, n. 2, 260-263.

OXENHAM, J. (1980). *Literacy: Writing, Reading and Social Organization*. London: Routledge & Kegan Paul.

RESNICK, D.P. & RESNICK, L.B. (1977). The Nature of Literacy: An Historical Exploration. *Harvard Educational Review*, v. 47, n. 3, 370-385.

ROBINSON, J.L. (1987). Literacy in Society: Readers and Writers in the Worlds of Discourse. In: Bloome, D. (ed.), *Literacy and Schooling*. Norwood, N.J.: Ablex.

ROCA, M.S. (1989). *El Analfabetismo en América Latina: Reflexiones sobre los Hechos, los Problemas y las Perspectivas*. Paris: Unesco.

SCHIEFFELIN, B.B. & GILMORE, P. (eds.) (1986). *The Acquisition of Literacy: Ethnographic Perspectives*. Norwood, NJ: Abiex.

SCHOFIELD, R.S. (1968). The Measurement of Literacy in Pre-Industrial England. In: Goody, J. (ed.), *Literacy in Traditional Societies*. Cambridge: Cambridge University Press.

SCRIBNER, S. (1984). Literacy in Three Metaphors. *American Journal of Education*, v. 93, n. 1, 6-21.

SCRIBNER, S. & COLE, M. (1981). *The Psychology of Literacy*. Cambridge: Harvard University Press.

SIMMONS, J. (1976). Retention of Cognitive Skills Acquired in Primary School. *Comparative Education Review*, v. 20, n. 1, 79-93.

SMITH, F. (1973). *Psycholinguistics and Reading*. London: Holt, Rinehart & Winston.

STREET, B.V. (1984). *Literacy in Theory and Practice*. Cambridge: Cambridge University Press.

UNESCO (1957). *World Illiteracy at Mid-century: a Statistical Study*. Monographs on Fundamental Education 11. Paris: Unesco.

UNESCO (1958). *Recommendation concerning the International Standardization of Educational Statistics*. Paris: Unesco.

UNESCO (1978a). *Revised Recommendation concerning the International Standardization of Educational Statistics*. Paris: Unesco.

UNESCO (1978b). Literacy in the World: Shortcomings, Achievements and Tendencies. In L.J.Chapman & P. Czerniewska (eds.), *Reading; from Process to Practice*. London and Henley: Routledge & Kegan Paul in association with The Open University Press.

UNESCO (1990). *Compendium of Statistics on Illiteracy - 1990 Edition*. Paris: Unesco.

UNESCO (1991). *World Education Report - 1991*. Paris: Unesco.

UNITED NATIONS (1989). *National Household Survey CapabilityProgramme; Measuring Literacy through Household Surveys*. NewYork: United Nations (Department of Technical Co-ooperationfor Development, Statistical Office).

WAGNER, D.A. (1983). Ethno-graphies: an Introduction. *International Journal of the Sociology of Language*, v. 42, 5-8.

WAGNER, D.A. (1986). Studying Literacy in Morocco. In: Schieffelin, B.B. & Gilmore, P. (eds.), *The Acquisition of Literacy: Ethnographic Perspectives*. Norwood, NJ: Ablex.

WAGNER, D.A. (1990). Literacy Assessment in the Third World: An Overview and Proposed Schema for Survey Use. *Comparative Education Review*, v. 34, n. 1, p. 112-138.

WAGNER, D.A. (1991). FUNCTIONAL LITERACY IN MOROCCAN SCHOOL CHILDREN. *READING RESEARCH QUARTERLY*, V. 26, N. 2, P. 178-195.

WAGNER, D.A., SPRATT, J.E. & KLEIN, G.D. (IN PRESS). THE MYTH OF LITERACY RELAPSE: LITERACY RETENTION AMONG MOROCCAN PRIMARY SCHOOL LEAVERS. *INTERNATIONAL JOURNAL OF EDUCATIONAL DEVELOPMENT*.

CSR-E-57 Development of Private Enrolment. First and Second Level Education 1975-1985. 1989 (English only)

CSR-E-58 ISCED Handbook: People's Republic of China. 1989 (English only)

CSR-E-59 Illiteracy in Latin America: facts, problems and prospects for the future. 1989 (English, Spanish)

CSR-E-60 Trends and Projections of Enrolment by Level of Education and by Age, 1960-2025. 1989 (English, French)

CSR-E-61 China: Educational Financing in the 1980s. 1991 (English only)

* * * * *

These documents may be obtained upon request from the Division of Statistics, Unesco, Paris. Those numbers no longer appearing in the above list are out-of-print.